DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1x.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-013062
Date Inspected: 17-Apr-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 800
OSM Departure Time: 1630
Location: Job Site

CWI Name: Tom Pasqualone and Bonifacio Daquiag **CWI Present:** ☑ Yes ☐ No

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG L3E/L4E plate ‘C2’ (5355 to 7955mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding fill to cover pass. The welder was observed welding in the 3G (vertical) position utilizing an automatic dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the other side of the plate prior welding. During welding, ABF Quality Control (QC) Tom Pasqualone was noted monitoring the welding parameters of the welder. QA performed parameter readings during welding with the following results; 245 amperes, 24.3 volts and 254mm per minute travel speed which are deemed acceptable to contract specifications. At the end of the shift, welding of the weld cover on the area mentioned above was completed.

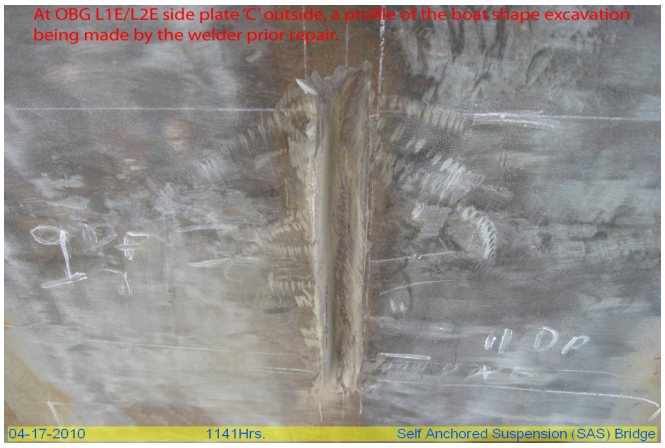
At OBG L1E/L2E side plate ‘C’ outside, QA randomly observed ABF/JV qualified welder Rick Clayborn ID #2773 perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded metal Arc Welding (SMAW) with 1/8” and 5/32” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The repair being welded was at location 950mm to 1210mm of side plate C2 and the one completed was at location 4120mm to 4160mm of side plate C1. The weld repairs were

excavated to a boat shape and the plates were preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Bonifacio Daquinag was noted monitoring the welder and also noted performing Magnetic Particle Testing (MT) on the excavations prior welding. QC was using a Parker Contour electromagnetic yoke with red magnetic powder as detecting media.

At OBG L2E/L3E side plate 'C' outside, ABF QC Jesse Cayabyab and Tony Steward were noted performing Magnetic Particle Testing (MT) on the flush ground back weld reinforcement of the splice butt joint and ground temporary attachment removal areas. The ABF QC was using a Parker Contour Probe electromagnetic yoke with red powder as detecting media. At the end of the QC MT test, QC informed QA that they found no significant indications except on ground temporary attachments wherein they need to grind/weld deep gouges. This QA also performed 10% MT verification on the splice butt joint just mentioned. QA was using Parker Contour Probe Model DA 400 with serial number 16989 electromagnetic yoke with red magnetic powder as detecting media. QA found no significant indications during the verification.

At OBG L2W/L3W bottom plate 'D' inside, certified ABF welder Jordan Hazelaar (ID #2135) was noted performing flat (1G) Submerged Arc Welding (SAW) on the splice butt joint. The welder was utilizing F7A6-EM12K-H8, 3.2mm electrode with corresponding Esab OK Flux 10.62 flux and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1. The plates were preheated to >150 degree F using Miller Proheat 35 Induction Heating System located at the other side of the plate prior and during welding . Welding parameters were monitored by ABF/QC Bernie Docena. QA noted the welding parameters, workmanship, and appearance of the completed fill and cover passes were satisfactory and were deemed acceptable to contract requirements.

At OBG L3W/L4W bottom plate 'D' inside, certified ABF welders James Zhen ID #6001 and Chun Fai Tsui were noted performing horizontal fillet (2F)/tack welding on the backing bar to the splice plates. The two welders were also noted using Shielded Metal Arc Welding (SMAW) with 5/32" diameter E7018H4R electrode. Welding parameters and performance of the welders were monitored by ABF QC Bernie Docena. At the end of the shift, tack welding of the backing bar to both sides of the splice butt joint was still continuing.



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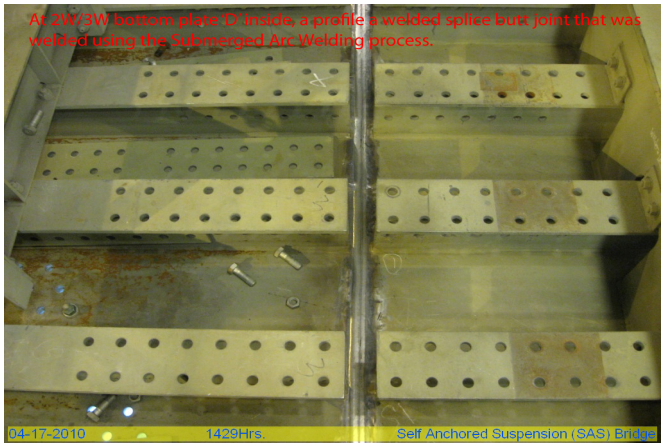

Summary of Conversations:

As stated above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer